

What is claimed is:

1. A hypergolic fuel analytical device comprising:

a compressed inert gas supply means;

a first valve flowably connected to said inert gas means;

a reservoir flowably connected to said first valve;

a second valve flowably connected to said reservoir;

a switching means conductively connected to said first valve and said second valve;

a gas conduction means connected to said second valve, said gas conduction means having a first gas lead and a second gas lead;

an oxidizer atomization means connected to said first gas lead;

a fuel atomization means connected to said second gas lead;

an oxidizer supply means flowably connected to said oxidizer atomization means;

and

a fuel supply means flowably connected to said fuel atomization means,

wherein fuel is fed from the fuel supply means into said fuel atomization means, oxidizer is fed from the oxidizer supply means into said oxidizer atomization means, the switching means activates the first valve so as to open said first valve and fill the reservoir with compressed inert gas, and the switching means then activates the second valve so as to open same and thus feed compressed inert gas from the second valve to the oxidizer atomization means and the fuel atomization means via the first gas lead and the second gas lead.

2. The hypergolic fuel analytical device of claim 1, further comprising:  
a fuel atomization means adjustment apparatus adjustably connected with said fuel atomization means, and  
an oxidizer atomization means adjustment apparatus adjustably connected with said oxidizer atomization means.
3. The hypergolic fuel analytical device of claim 1, further comprising an ignition detection means.
4. The hypergolic fuel analytical device of claim 1, further comprising a programmable computer control means electrically connected to the switching means, wherein testing operation of the device may be controlled thereby.
5. The hypergolic fuel analytical device of claim 1, further comprising a containment means adjacent the fuel atomization means and oxidizer atomization means, for containment of hypergolic reactions.
6. The hypergolic fuel analytical device of claim 1, further comprising:  
a fuel supply control means flowably connected with the fuel supply means and the fuel atomization means, which controls the supply of fuel fed to the fuel atomization means; and  
an oxidizer supply control means flowably connected with the oxidizer supply means, which controls the supply of fuel fed to the oxidizer atomization means.

7. The hypergolic fuel analytical device of claim 4, further comprising:

a fuel supply control means flowably connected with the fuel supply means and the fuel atomization means, which controls the supply of fuel fed to the fuel atomization means; and

an oxidizer supply control means flowably connected with the oxidizer supply means, which controls the supply of fuel fed to the oxidizer atomization means,

wherein the programmable computer control is in electrical connection with the fuel supply control means and oxidizer supply control means, so as to control the supply of fuel and oxidizer fed to the fuel atomization means and the oxidizer atomization means from the fuel supply means and oxidizer supply means.

8. The hypergolic fuel analytical device of claim 1, further comprising a third valve flowably connected to said second valve, and said gas conduction means connected to said third valve opposite said second valve.

9. A hypergolic fuel analytical device is provided comprising:

a compressed inert gas supply means;

a fast-action valve flowably connected to said inert gas means;

a switching means conductively connected to said fast-action;

a gas conduction means connected to said second valve, said gas conduction means having a first gas lead and a second gas lead;

an oxidizer atomization means connected to said first gas lead;

a fuel atomization means connected to said second gas lead;

an oxidizer supply means flowably connected to said oxidizer atomization means;

and

a fuel supply means flowably connected to said fuel atomization means,  
wherein fuel is fed from the fuel supply means into said fuel atomization means,  
oxidizer is fed from the oxidizer supply means into said oxidizer atomization means, the  
switching means activates the fast-action valve so as to open said fast-action valve and  
thus feed compressed inert gas from the fast-action valve to the oxidizer atomization  
means and the fuel atomization means via the first gas lead and the second gas lead.

10. The hypergolic fuel analytical device of claim 2, further comprising an  
ignition detection means.

11. The hypergolic fuel analytical device of claim 2, further comprising a  
programmable computer control means for electrically connected to the switching means,  
wherein testing operation of the device may be controlled thereby.

12. The hypergolic fuel analytical device of claim 2, further comprising a  
containment means adjacent the fuel atomization means and oxidizer atomization means,  
for containment of hypergolic reactions.

13. The hypergolic fuel analytical device of claim 2, further comprising:  
a fuel supply control means in flowable connection with the fuel supply means  
and the fuel atomization means, which controls the supply of fuel fed to the fuel  
atomization means; and

an oxidizer supply control means in flowable connection with the oxidizer supply  
means, which controls the supply of fuel fed to the oxidizer atomization means.

14. The hypergolic fuel analytical device of claim 3, further comprising a  
programmable computer control means for electrically connected to the switching means,  
wherein testing operation of the device may be controlled thereby.

15. The hypergolic fuel analytical device of claim 4, further comprising a containment means adjacent the fuel atomization means and oxidizer atomization means, for containment of hypergolic reactions.

16. The hypergolic fuel analytical device of claim 5, further comprising:

a fuel supply control means in flowable connection with the fuel supply means and the fuel atomization means, which controls the supply of fuel fed to the fuel atomization means; and

an oxidizer supply control means in flowable connection with the oxidizer supply means, which controls the supply of fuel fed to the oxidizer atomization means.